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**Biology Cellular Reproduction (Chapter 9 Outline)**

*Vocabulary*: Define in your own words

Cell Cycle-

Mitosis-

Cytokinesis-

Interphase-

Prophase-

Metaphase-

Anaphase-

Telophase-

Chromosome-

Chromatin-

Sister chromatid-

Centromere-

Spindle apparatus-

Stem cell-

Apoptosis-

Carcinogen-

Cancer-

Briefly describe the following concepts:

Why are cells relatively small? In other words, what limits cell size? Be specific. (2 pts)

What are the stages of the cell cycle? (1 pt)

What are the stages of Interphase, the longest part of the cell cycle? Explain what happens at each stage. (3 pts)

What are the stages of Mitosis and what happens at each stage? Give a detailed account of what happens at each stage and why that is significant to cellular reproduction. (8 pts)

Explain what happens during cytokinesis. Be specific. (2 pts)

What are the roles of cyclin proteins and cyclin-dependent kinase enzymes in controlling the cell cycle? Be specific. (2 pts)

What is cancer and how does it relate to the cell cycle? (2 pts)

How does apoptosis control cancer and what is the role of apoptosis in the cell cycle? (2 pts)

What are the two types of stem cells and what are their potential uses? What makes stem-cell engineering controversial? (6 pts)

**Write three things that you learned about Cellular Reproduction***:*

*Make sure to write a full sentence.*

***Example sentence****: I learned that colorblindness is a X chromosome linked genetic disorder that affects more males than females.*

*1.*

*2.*

*3.*